

AMENDMENTS TO THE CLAIMS

- 1 1. (Currently Amended) A computer-implemented method for buffering data in a
2 multithreaded environment, comprising:
3 ~~generating log data in response to a request for accessing a resource;~~
4 ~~identifying a buffer management structure that is associated with a plurality of~~
5 ~~data buffers;~~
6 reading a last-buffer index value that is associated with the buffer management
7 ~~structure, wherein said last buffer index value provides information that~~
8 identifies a last-data buffer that was last used for buffering data;
9 incrementing the buffer index value;
10 locating a buffer array entry that is associated with the buffer index value;
11 determining whether the buffer array entry indicates a particular value;
12 if the buffer array entry does not indicate the particular value, then attempting to
13 obtain a lock on a particular data buffer that is associated with the buffer
14 array entry; and
15 if the buffer array entry indicates the particular value, then incrementing the
16 buffer index value.
17 ~~selecting a data buffer that is associated with said buffer management structure~~
18 ~~based on said last buffer index value.~~
- 1 2. (Currently Amended) The method of Claim 1, further comprising:
2 if the attempt to obtain the lock on the particular data buffer succeeds, then
3 updating the buffer array entry to indicate the particular value, maintaining
4 ~~a data structure that is associated with said plurality of data buffers,~~
5 ~~wherein the data structure is associated with a group of flags that provide~~
6 ~~an indication as to whether an entry in said data structure is likely to be~~
7 ~~associated with a data buffer that is available for storing said log data; and~~

8 ~~prior to writing said log data, reading a flag associated with a particular data~~
9 ~~structure entry to determine whether said particular data structure entry is~~
10 ~~likely associated with a data buffer that is available for storing said log~~
11 ~~data.~~

1 3. (Currently Amended) The method of Claim 1, further comprising:
2 receiving a connection request from a client;
3 assigning a thread of execution to process said connection request; and
4 ~~wherein the step of identifying a buffer management structure further comprises~~
5 ~~the step of said thread of execution selecting said a particular~~ buffer
6 management structure from a plurality of buffer management structures,
7 wherein said plurality of buffer management structures are each associated
8 with a set of data buffers that are used for buffering data to a physical
9 memory unit;
10 wherein the buffer index value is associated with the particular buffer
11 management structure.

1 4. (Currently Amended) The method of Claim 1, ~~wherein~~ further comprising:
2 generating log data in response to a request for accessing a resource, wherein said
3 resource represents one or more sets of content that are associated with a
4 network server; and
5 ~~the step of identifying a buffer management structure comprises the step of~~
6 selecting ~~said a~~ buffer management structure based on one or more
7 addresses in which said one or more sets of content are stored on said
8 network server.

1 5-6. (Canceled)

- 1 7. (Currently Amended) The method of Claim 1, further comprising the step of
2 writing ~~said~~ log data into said particular data buffer.
- 1 8-9. (Canceled)
- 1 10. (Currently Amended) The method of Claim 1, further comprising:
2 maintaining ~~said~~ a plurality of data buffers as an array of available buffers; and
3 in response to detecting that ~~a~~ the particular data buffer contains a particular
4 limited amount of free data space, removing said particular data buffer
5 from said array of available buffers.
- 1 11. (Original) The method of Claim 10, wherein the step of removing said particular
2 data buffer from said array of available buffers further comprises linking said
3 particular data buffer into a list of ready-to-write data buffers.
- 1 12. (Original) The method of Claim 11, further comprising:
2 removing said particular data buffer from said array of available buffers; and
3 storing on a non-volatile storage unit information contained in said particular data
4 buffer.
- 1 13. (Currently Amended) The method of Claim 1, further comprising:
2 maintaining ~~said~~ a plurality of data buffers as an array of available buffers; and
3 ~~wherein the step of selecting a data buffer that is associated with said buffer~~
4 ~~management structure comprises the step of:~~
5 in response to determining that no data buffer is available in said array of
6 available buffers for storing said log data, requesting a free data buffer
7 from a global list of free data buffers.
- 1 14-35. (Canceled)

1 36. (New) A computer-readable medium carrying one or more sequences of
2 instructions for buffering data in a multithreaded environment, wherein execution
3 of the one or more sequences of instructions by one or more processors causes the
4 one or more processors to perform the steps of:
5 reading a buffer index value that identifies a data buffer that was last used for
6 buffering data;
7 incrementing the buffer index value;
8 locating a buffer array entry that is associated with the buffer index value;
9 determining whether the buffer array entry indicates a particular value;
10 if the buffer array entry does not indicate the particular value, then attempting to
11 obtain a lock on a particular data buffer that is associated with the buffer
12 array entry; and
13 if the buffer array entry indicates the particular value, then incrementing the
14 buffer index value.

1 37. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the steps of:
3 if the attempt to obtain the lock on the particular data buffer succeeds, then
4 updating the buffer array entry to indicate the particular value.

1 38. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the steps of:
3 receiving a connection request from a client;
4 assigning a thread of execution to process said connection request; and
5 selecting a particular buffer management structure from a plurality of buffer
6 management structures, wherein said plurality of buffer management
7 structures are each associated with a set of data buffers that are used for
8 buffering data to a physical memory unit;

9 wherein the buffer index value is associated with the particular buffer
10 management structure.

1 39. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the steps of:
3 generating log data in response to a request for accessing a resource, wherein said
4 resource represents one or more sets of content that are associated with a
5 network server; and
6 selecting a buffer management structure based on one or more addresses in which
7 said one or more sets of content are stored on said network server.

1 40. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the step of writing log data into said particular data
3 buffer.

1 41. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the steps of:
3 maintaining a plurality of data buffers as an array of available buffers; and
4 in response to detecting that the particular data buffer contains a particular limited
5 amount of free data space, removing said particular data buffer from said
6 array of available buffers.

1 42. (New) The computer-readable medium of Claim 41, wherein the step of removing
2 said particular data buffer from said array of available buffers further comprises
3 linking said particular data buffer into a list of ready-to-write data buffers.

1 43. (New) The computer-readable medium of Claim 42, further comprising
2 instructions for performing the steps of:
3 removing said particular data buffer from said array of available buffers; and

4 storing on a non-volatile storage unit information contained in said particular data
5 buffer.

1 44. (New) The computer-readable medium of Claim 36, further comprising
2 instructions for performing the steps of:
3 maintaining a plurality of data buffers as an array of available buffers; and
4 in response to determining that no data buffer is available in said array of
5 available buffers for storing said log data, requesting a free data buffer
6 from a global list of free data buffers.

1 45. (New) A computer system, comprising:
2 means for reading a buffer index value that identifies a data buffer that was last
3 used for buffering data;
4 means for incrementing the buffer index value;
5 means for locating a buffer array entry that is associated with the buffer index
6 value;
7 means for determining whether the buffer array entry indicates a particular value;
8 means for attempting to obtain a lock on a particular data buffer that is associated
9 with the buffer array entry in response to a determination that the buffer
10 array entry does not indicate the particular value; and
11 means for incrementing the buffer index value in response to a determination that
12 the buffer array entry indicates the particular value.